

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claims 1-19 (canceled)

Claim 20 (previously presented) A tire cavity filling system comprising:

a grinding device capable of grinding cure polyurethane into core bits, having an outlet;  
an elongated rotatable screw device for mixing core bits and a liquid virgin polyurethane  
and pressurizing and transferring the mixed material into the core of a tire, said screw  
device disposed adjacent to said grinding device and having an input attached to said  
grinding device outlet to receive core bits from the grinding device; and  
a controller electronically coupled to the grinding device and the elongated screw device.

Claim 21 (new) The system of claim 20 further comprising at least one holding tank for at  
least one unused flatproofing material, a transfer component connecting each holding tank to the  
a mixing device and a transfer apparatus connecting the mixing device to the elongated rotatable  
screw device.

Claim 22 (new) The system of claim 20 wherein said grinding device is capable of  
producing core bits with an average diameter of less than .125 inches.

Claim 23 (new) The system of claim 20 wherein said grinding device is a fine grinder, said  
system further comprising a coarse grinder, said fine grinder disposed to receive ground  
polyurethane from the coarse grinder.

Claim 24 (new) The system of claim 20 wherein said elongated rotatable screw device is  
subdivided into three sections.

Claim 25 (new) The system of claim 24 wherein material from said grinding device is fed

into the first of the three sections.

Claim 26 (new)        The system of claim 24 wherein the first and second sections are used to develop a pressure in the ground material.

Claim 27 (new)        The system of claim 24 wherein the third section additionally comprises an input device for at least a single stream of unused flatproofing material.

Claim 28 (new)        The system of claim 24 wherein the third section additionally comprises multiple input devices for multiple streams of unused flatproofing material.

Claim 29 (new)        The system of claim 20 further comprising a sensing device electronically coupled to said controller.

Claim 30 (new)        The system of claim 20 further comprising a puncturing device electronically connected to said controller for relieving excess tire pressure.

Claim 31 (new)        The system of claim 20 wherein said elongated screw device is notched.

Claim 32 (new)        The system of claim 20 further comprising a cleaning device connected to said grinding device and said elongated screw device.

Claim 33 (new)        The system of claim 32 wherein said controller is electronically connected to said cleaning device.

Claim 34 (new)        The system of claim 21 wherein said controller is electronically connected to said mixing device.